



August 26, 2003

Sergio Rivas
Project Manager
Alternative Development Strategic Objective Team
USAID/Bolivia

Dear Mr. Rivas:

ACDI/VOCA respectfully submits the final report for the North Yungas Integrated Rural Development Project, Cooperative Agreement Number 511-A-00-01-00099-00. An original and one copy of the report are being submitted to the Mission to you as our Cognizant Technical Officer and Mr. Phillip Tresch as Contracting Officer.

For the record we are submitting as Appendix 1 of the final report a copy of the most recent SF-269A and a detailed budget report. This submission documents total project outlays equaling an amount of \$666,803, which represents 99.14% of the CA award of \$672,545. At this time, ACDI/VOCA does not foresee any reason that additional charges would be incurred. It is believed that all invoices have been received and paid and that the project is ready for the initiation of close-out procedures.

ACDI/VOCA is pleased with the various results and goals achieved during the life of project - April 16, 2001 to September 30, 2002. Included in the attached report is a brief summary of each of the small-grant activities funded under this project.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Charles Cox
Regional Vice President
Latin America and Caribbean Programs
Manager, Worldwide Farmer-to-Farmer and Cooperative Development Programs

cc: Mr. Carl Leonard
Mr. Barry O'Connor
Mr. Glenn Blumhorst
Ms. Treena Bishop

EXECUTIVE SUMMARY

In the last quarter (July to September 2002) of the entire reporting period for this agreement (April 2001 to September 2002), ACDI/VOCA continued to support the Vice Ministry of Alternative Development's (VIMDESALT's) and USAID/Bolivia's strategy to eliminate the production of excess and illegal coca in the Yungas through its high-visibility, high-impact, North Yungas Integrated Rural Development Project. Throughout the period ACDI/VOCA worked to complete the few remaining projects that had previously suffered delays due to a variety of circumstances, including late delivery of construction materials, delays by contractors in completing scheduled activities on time and delays by communities and municipalities in providing counterpart support. At the end of the quarter, ACDI/VOCA had completed 100% of the small-grants funded activities, bringing a successful close to the Yungas-based community-grants pilot project. As a result, this effort successfully enabled USAID/Bolivia and the Government of Bolivia (GOB) to lay a solid foundation for larger-scale alternative development efforts in the region.

During the final quarter, ACDI/VOCA staff worked diligently to bring closure to the project. Major accomplishments during the period include the following:

- Closure to **31 of 31** planned projects in the municipalities of Coroico, Caranavi, Palos Blancos and La Asunta.
- Completion of a detailed analysis of the environmental impact created by the small-grant construction activities.
- Completion of a socio-economic impact assessment of the project's activities.
- Completion of a technical study of the structural soundness of the Santa Fe Bridge. The study showed that the bridge is structurally stable.
- Completion of a technical study of the structural soundness of the teachers' dormitory in Coroico to determine if a retention wall was needed. The study showed that a retention wall was structurally unnecessary.

By the end of September, 2002, all small-grant projects were complete, bringing a close to the North Yungas Integrated Rural Development project. The final status report is provided in Appendix 2.

I. BACKGROUND AND CONTEXT

Following the Bolivian government's success in eliminating illegal coca from the Chapare, the GOB has shifted the focus of eradication of illegal coca to the Yungas region. While the amount of illegal coca produced in the Yungas is far less than the amount previously produced in the Chapare, the GOB has decided to eradicate all illegal coca in Bolivia. Moreover, an important additional reason for focusing efforts on the Yungas is that there is growing evidence that in response to successful eradication and interdiction efforts in the Chapare, participants in the illegal drug trade have targeted the Yungas as a potential relocation area. Thus, restricting expanding coca production in existing and new areas of the Yungas is also a high priority of the GOB and its partners.

USAID/Bolivia has worked closely with other U.S. government agencies in assisting the GOB in achieving the overall goal of permanently eliminating illegal coca production from Bolivia. In the Yungas, USAID/Bolivia, in coordination with VIMDESALT, has launched a high-impact development program that will advance the goal of eliminating illegal coca from the Yungas. This program has two important goals: 1) to create strong public awareness that the future of the Yungas lies in the development of licit income-earning possibilities rather than a fruitless defense of illegal coca, and, 2) to create incentives for individuals and communities to eliminate excess coca. To support the GOB and USAID/Bolivia in this effort, ACDI/VOCA was assigned to implement high-visibility, high-impact projects in municipalities located in the provinces of North Yungas, Caranavi and South Yungas.

By the close of project, ACDI/VOCA, in coordination with VIMDESALT, USAID/Bolivia, municipal governments and local NGOs, had completed 31 small-grant projects in the areas of road maintenance, bridge construction, agricultural production (bio-control), social infrastructure and development of a specialty coffee industry. As part of the same USAID/Bolivia program, U.S. NGO Save the Children/Bolivia was assigned to work in South Yungas (La Asunta), where it implemented seven social infrastructure projects.

II. PROJECT ACTIVITIES

As part of the USAID/Bolivia funded Yungas Development Initiative (YDI), ACDI/VOCA began implementing high-impact, high-visibility small-grant projects under the North Yungas Integrated Rural Development project in April, 2001. As part of this effort, ACDI/VOCA, in coordination with VIMDESALT and other local entities, was able to implement a total of 31 small-grant projects during the life of project.

During the last quarter of the project, ACDI/VOCA focused on finalizing each of the small-grant projects. As part of the closeout procedures, a final technical inspection was conducted by a qualified engineer for each infrastructure project. The purpose of the inspections was to verify that the projects had been constructed in accordance with plans, technical specifications and contract documents, and to identify and complete any remaining tasks. Based on the results of the inspections, ACDI/VOCA worked with both responsible contractors and the communities to finalize all remaining details so that the projects could be inaugurated and delivered to the intended beneficiaries.

Additionally, as part of the closeout process, ACDI/VOCA prepared “*Fichas Ambientales*” for all applicable projects under the North Yungas Integrated Rural Development Project. The *Ficha Ambiental* is an environmental impact evaluation form developed by the Bolivian Environment Impact Evaluation Directorate (*Dirección de Evaluación de Impacto Ambiental*.) The *Ficha Ambiental* includes a description of the project, materials used, wastes generated, disposal methods, and identifies key potential environmental impacts and corresponding mitigation measures. Copies of all *Fichas Ambientales* prepared for the project are maintained on file at the ACDI/VOCA Bolivia La Paz office. Copies were also provided to USAID/Bolivia.

The following is a brief summary of each small-grant project completed under this pilot community-grant program.

**SMALL-GRANT PROJECTS IMPLEMENTED UNDER THE NORTH YUNGAS
INTEGRATED RURAL DEVELOPMENT PROJECT**

PROJECTS IMPLEMENTED IN COROICO

**PROJECT: CONSTRUCTION OF HOUSING FOR TEACHERS, FELIX REYES ORTIZ
EDUCATIONAL UNIT**

The municipality of Coroico requested the construction of a teachers' dormitory in April of 2001. The project was presented in May 2001 and approved in June 2001. Construction of the housing project began in July 2001.

The justification for the project was that prior to the construction of the teachers' dormitory in Coroico, the teachers lived in rented houses, apartments or borrowed housing. Under this system, the already economically-challenged parents were expected to share the additional financial burden of contributing to the teachers' rent payments. As they did not have sufficient resources to adequately support the teachers, feelings of resentment on both parts became significant. The instability due to lack of secured housing resulted in teachers frequently asking to be relocated to other communities. This constant rotation of teachers caused a domino effect of instability in the school system which had an overall negative impact on the students' educational experience.

In May of 2002, after 10 months of construction and significant participation by the community, the teachers' housing project was completed. In June of 2002 the teachers moved into their new home. Although the housing unit was built to accommodate 26 teachers, with two teachers to a room, only 13 teachers are currently living in the housing complex. This current, lower number allows each of the teachers to have his/her own private room. Fortunately, at the present time, this arrangement is manageable. However, as the demand for teacher housing increases with the growing student population, it will be necessary to return to the shared-room system.

In addition to the dormitory rooms, the housing complex includes a shared kitchen, dining room, game room, six bathrooms, a storeroom and a patio. There is also a balcony on each floor allowing teachers to relax in the open air, without having to leave their own home. The construction of the teachers' housing has had multiple socio-economic impacts, including:

- Parents who were previously responsible for paying a share of teacher-housing costs are now free to redirect those resources into more urgent needs or productive activities.
- The constant conflict between the families and the school system, which mainly revolved around the financial burden placed on the parents, has been alleviated.
- Teachers, who are now able to live comfortably, are willing to stay through their terms, providing more stability to both their lives and those of their students.

Approximately 220 families and 329 students of the Felix Reyes Ortiz educational unit have benefited from this project, as well as 13 teachers who are currently living in the new building.

PROJECT: REFURBISHMENT OF 22 EDUCATION FACILITIES

The municipality of Coroico requested the refurbishment of 22 schools in April 2001. The project was presented in May and approved in June. Work on these schools began in July 2001.

Prior to the refurbishments, the 22 schools selected were in extremely poor condition. In many cases the cement walls were eroding away, paint had peeled off the walls and ceilings, windows had been broken and never replaced, electrical wiring was outdated and in desperate need of replacement, and bathrooms were either nonexistent or in need of significant repair. Though the repair work done at each of the schools was similar, and thus there is a tendency to lump all 22 school repair mini-projects together, ACDI/VOCA felt it beneficial to document each one in detail here to illustrate the high-level impacts created by each one of the refurbishments. A brief summary of each follows.

- **SAN FRANCISCO JAVIER ELEMENTARY AND HIGH SCHOOL**

Prior to the project the classroom walls were dirty and deteriorated, and the structure was in great need of a retaining wall. As part of the project, paint and 50 bags of cement were given to the community. With these materials the community members painted the inner and outer walls of six classrooms. The cement was used to repair the walls prior to painting and construct the retaining wall.

The San Francisco Javier educational center has 23 teachers and one principal. It offers both elementary and high school-level education. Students from three different municipalities (Larecaja, Caranavi and Sorata) and six communities (Chovacollo, Carmen Pampa, San Cristobal, San Juan de la Miel, Coroico Viejo, and San Pedro de la Loma) attend this educational facility, as it also offers a boarding school for students who have to travel long distances in order to attend classes. It is estimated that 373 students benefited from this project.

The refurbishment of this school was initiated in August 2001 and completed in November 2001. The participation on part of the community was extremely high, making this project a quick success.

- **SAN PEDRO DE LA LOMA ELEMENTARY SCHOOL**

Prior to the refurbishment the school building was significantly deteriorated and did not have any windowpanes. Dust, wind and insects came into the classrooms, hindering the students' learning process. Students complained that they were unable to concentrate on their work because of the poor environment.

The scope of the project included the repair of walls, painting of two classrooms and the principal's office, and the installation of windowpanes. The project provided the paint, cement and windowpanes for the school's restoration. Using these materials, along with manual labor and gates provided by the community, the project was completed in three months. At present, the children take turns cleaning and maintaining the school under the supervision of the teachers. These activities are monitored by the president of the district.

- **SAN PABLO ELEMENTARY SCHOOL**

The San Pablo school, which hosts kindergarten through eighth grade, was in poor condition prior to the project. The school's walls and ceilings were cracked and peeling, and the environment, which was one of disrepair, was negatively impacting the students. In order to resolve these problems, the project provided the school with paint and cement. With these materials the community members repaired and painted the walls of four classrooms. Upon its completion, 116 students directly benefited from this project.

- **MUNAYPATA PRIMARY SCHOOL**

Prior to the project the Munaypata school building was in extremely poor condition. The building did not have windowpanes or protective bars over the openings. Additionally, the bathrooms did not have doors. Due to the lack of windowpanes, strong winds often blew dust into the classrooms, distracting the work of the students and making it nearly impossible to keep the educational facility clean.

As part of the refurbishment the project provided paint, protective bars for the windows, windowpanes and bathroom doors. With these materials the community members repaired and painted two classrooms and a room for the teacher, and installed the bathroom doors. As a result, 29 students and one teacher directly benefited from the project. Since the educational center is also used as a meeting place for the community, a large percentage of the adult population has also directly benefited.

- **CAPELLANIA PRIMARY SCHOOL**

Prior to the refurbishment the building's walls were dirty and deteriorated. As part of the restoration the project provided the paint, and the community painted the walls of three classrooms. The school, which has one teacher and 20 students, hosts classes for pre-kindergarten, kindergarten, first and second grade.

- **SANTA BARBARA ELEMENTARY SCHOOL**

The school building was significantly deteriorated prior to the project. As part of the project paint and cement were provided. With these materials the community restored and painted the walls of two classrooms. The school, which has one teacher and 24 students, hosts classes for pre-school, first, third and fourth grade.

- **CONCEPCIÓN ELEMENTARY SCHOOL**

Prior to the project the walls and ceilings of the building were deteriorated, and there were no windowpanes or protective bars on the windows. For security the window openings had been temporarily covered with wood. As a result, the classrooms were hot and dark, creating an uncomfortable atmosphere in which to learn. As part of the project, paint, cement, stucco, windowpanes and protective steel bars for the windows were provided. With these materials the community repaired and painted the walls and ceilings, and installed the windowpanes and protective bars.

The school, which has one teacher and 23 students, hosts classes for second, third, and fourth grades. At present the teacher and students report that the classrooms are cooler and have better lighting. There are no longer problems with the wind, dust or the insects that had distracted the students while in class. Overall, the teacher reports that the environment is significantly more conducive to learning. In addition to directly benefiting the students, this project directly benefited the majority of the community, as the school is used as a church, as well as a regular meeting place for the adults.

- **CRUZ LOMA EDUCATIONAL CENTER**

Prior to the improvements implemented under the project the school building was deteriorated and dirty. The school patio had dirt floors, making it very difficult to keep the classrooms clean. Using funds and materials provided by the project, the walls of six classrooms and the principal's office were repainted and a cement patio was constructed. This project directly benefited 23 teachers and 382 students from several communities, including Santa Barbara, Concepción, Santiago Grande, Capellanía and San Jerónimo.

- **FRANZ TAMAYO ELEMENTARY SCHOOL**

The Franz Tamayo Elementary School, which hosts classes for kindergarten through eighth grade, has eight teachers and 110 students who attend from several communities, including Coroboya, Negrillani, Chicchipa, Yarisa and Tocaña. As part of the project, paint, cement and electrical cables were provided, and the community restored and painted the walls of six classrooms and four rooms within the teachers' dormitory.

- **CHIJCIPA PRIMARY SCHOOL**

The Chijchipa primary school hosts kindergarten through third grade. The school has one teacher and 16 students. The project provided paint, cement and electrical cables for improvements. With these materials the community members restored and painted the walls of one of the classrooms and the principal's office.

- **TOCAÑA PRIMARY SCHOOL**

Prior to implementation of the project the walls of the school building were in very poor condition. Through the project the walls were repaired and painted. This project directly benefited 24 students and one teacher. The school hosts kindergarten through third grade.

- **YOLOSA ELEMENTARY SCHOOL**

The Yolosa elementary school hosts classes for first through fifth grades. It has 24 students and one teacher. Prior to the project the walls and ceilings were significantly deteriorated. Paint and cement were provided and with these materials the community members restored and painted the walls of three rooms.

- **SAN JOSE DE CHICALULO ELEMENTARY SCHOOL**

The San Jose de Chicalulo elementary school hosts classes for first through fifth grades. The school has one teacher and 23 students. Prior to the project the school building was in poor condition. As part of the project, paint and cement were provided. With these materials the community members restored and painted the walls of two classrooms and one room for the teacher's housing.

- **UNDUAVI ELEMENTARY SCHOOL**

The Unduavi elementary school, which hosts preschool through fifth grades, has 20 students and one teacher. As part of the project the walls of two classrooms were painted and repaired.

- **COROICO KINDERGARTEN**

Prior to the project the school only had a dirt floor. Teachers and parents complained that as a result the students were constantly covered in soil and mud. The school also had a serious drainage problem in which rainwater runoff from the school would run down its neighbors' walls, causing them to deteriorate rapidly. As part of the project the drainage problem was solved through the installation of pipes and a brick retention wall. A cement patio and floors were constructed to reduce the problem of mud and dirt and the roof over the corridors was repaired to stop leaking. Fifty students directly benefited from this project.

- **SAN PEDRO PAROCHIAL PUBLIC SCHOOL**

The San Pedro Parochial school has 14 teachers, 286 students and hosts classes for first to sixth grade. Prior to the project the school building was in extremely poor condition. There was no electricity; windowpanes were missing allowing insects, wind, dust and unwanted guests to enter the building, the walls and ceilings were eroded, and the facility lacked a functioning bathroom. As part of the project the roof of the theater was repaired, walls were painted and restored, fences were built and windowpanes were installed in six classrooms. Additionally, electricity was installed throughout the building and a bathroom was built.

- **VILLA ROSARIO PUBLIC SCHOOL**

The project provided wood and windowpanes for the refurbishment of the building which was previously in extremely poor condition. The interior and exterior walls were also repaired and painted. The school now has four new classrooms, a principal's office and a multifunctional facility that can be used for a variety of different sports.

- **NIGRILLANI PUBLIC SCHOOL**

Prior to the refurbishment the building was in poor condition. As part of the project the walls of six classrooms were repaired and painted, and windowpanes were installed. The outside walls were also repaired and painted. This project directly benefited 18 students and one teacher.

- **CHALLA PUBLIC SCHOOL**

Challa Public School hosts classes for preschool through eighth grades. It has 104 students and five teachers. As part of the refurbishment of the building the school now has two classrooms, a principal's office and a multifunctional sports facility for the students.

- **PACALLO PUBLIC SCHOOL**

As the result of the refurbishment of Pacallo's public school the walls of several classrooms and the teachers' rooms were painted and repaired. The project also provided materials for the construction of a two-story facility that was later painted inside and outside. The school currently has 11 classrooms, living quarters for eight teachers, a principal's office, administrative offices and a multifunctional sports facility for the students.

- **POLO POLO PUBLIC SCHOOL**

The students and teacher of Polo Polo public school were the direct beneficiaries of the project. As part of the work performed the walls of one classroom were repaired and painted and the outside walls of the building were repaired and painted. Currently the school has one classroom and living quarters for one teacher.

- **SUAPI PUBLIC SCHOOL**

Prior to the refurbishment the building was in extremely poor condition. As part of the project the walls of the classrooms and those of the exterior of the building were painted and repaired.

PROJECT: CARMEN PAMPA STUDENTS PROJECT

A total of four Carmen Pampa University students were granted a scholarship to attend a two-week educational exchange program at South Dakota State University located in Brookings, South Dakota, USA. The dates of the program were May 30 – June 12th. The following students attended the program: Fortunato Velasquez and Cecilia Carrizales, agronomy students, and Javier Mollinedo and Valeria Yapur, veterinary medicine students.

The objective of the project was to provide the students with an opportunity for professional and academic growth in their academic areas. During the visit, the students were able to experience firsthand some of the teaching, research projects and facilities at South Dakota State University, and observe the latest technology in various processes in the fields of agronomy and veterinary medicine. During the program, the students participated in a number of activities including the following:

- Tour of the university's soils laboratory and explanation of the soil-testing equipment.
- Tour of the university's greenhouse and explanation of greenhouse processes.
- Visit to a fruit research station – observation of management methods for apples, raspberries, grapes and other fruits.
- Visit to a Christmas tree farm; explanation of farming and management methods.

- Visit and tour of the university's slaughterhouse; observation of processing technology.
- Visit to a veterinary clinic; demonstration of various treatments.
- Visit to an entomology research station; explanation of various types of pests that attack local crops.
- Visit to the university's dairy processing plant; observation of processing technology.
- Visit to the university's seed laboratory.

Through the scholarship the students gained valuable experience and were able to share what they had learned with their classmates at the university through presentations and a trip report.

PROJECT: THE COFFEE FAIR

As part of the small-grant program, ACDI/VOCA provided financial and technical support to the Municipal Government of Coroico to hold the 2001 National Coffee Fair and Festival. The coffee festival is held each year in the city of Coroico and is normally funded and organized by the municipality of Coroico with participation from the municipalities of Caranavi, Irupana, Yanachi, Chulumani, La Asunta, and Palos Blancos. The main objectives of the event were to promote the social, economic and cultural activities related to coffee production within the Yungas region and its surroundings.

Attractions at the event were to include a coffee fair and expo, election of a “Coffee Queen”, a folk festival, an exposition of artisan works, musical performances and a number of discussion panels on issues facing the local coffee industry.

Support from ACDI/VOCA was used for organizational activities and preparation of the fair in the form of construction of stands, installation of temporary electrical facilities, illumination, and contracting temporary workers to clear weeds and perform general clean-up. Funds were also used to cover minor costs such as decorations and various implements.

The Coffee Fair was only a moderate success. Several of the events were cancelled due to the fact that dignitaries and officials from several municipalities cancelled or were unable to attend.

PROJECTS IMPLEMENTED IN PALOS BLANCOS

PROJECT: EL SILLAR HIGH SCHOOL - CONCLUSION

Prior to the start of the project the El Sillar High School, which has seven teachers and 70 students, had four classrooms under construction that were unusable due to their unfinished state. As part of the project materials were provided and the community contributed the labor needed to complete the work.

PROJECT: VILLA COROICO PRIMARY SCHOOL - CONCLUSION

The Villa Coroico primary school offers first through third grade to 23 students from three different communities. At the beginning of the project the school had three rooms under construction but did not have the funds to complete the unfinished classrooms. The project supplied the materials and the community provided the labor needed to finish the work on the rooms. The students and their parents are responsible for cleaning and maintaining the school.

PROJECT: CONCLUSION OF THE LAS DELICIAS ELEMENTARY SCHOOL

The Las Delicias elementary school offers kindergarten through eighth grade to 90 students from the communities of Las Delicias, Amancaes, Belén, Pacha, Paraíso, Japón, Batallas, Ingaví and Villa Coroico. At the start of the project the school had three classrooms under construction but the community did not have the funds to complete them. With the help of the project the classrooms were completed and the school, which was previously unable to comfortably accommodate its students, is now able to do so in a much more pleasant atmosphere.

PROJECT: SIMAY COVENDO ELEMENTARY SCHOOL

The Simay Covendo elementary school, which has only one teacher, offers first through fourth grade to 29 students. Prior to the project the school had two classrooms that were old and deteriorated, the roof was damaged and leaked when it rained, and there were bats in the roof, which the community felt were a threat to the students' health. As part of the project two new classrooms were constructed, the roof was repaired, and the bats were evicted.

PROJECT: PALOS BLANCOS BRIDGE

There was no bridge in close proximity to the area to allow vehicles and pedestrians to cross the river during the rainy season prior to the implementation of this small-grants project. This caused many difficulties for the small vehicles that generally provide transportation in the zone. Additionally, community members who had to cross the river to take their products to the market lost valuable time waiting for the water level to fall in order to safely cross in vehicles. This lack of access negatively affected their economy because fewer products made it to market than would have been possible had a bridge been available.

With funds provided by the project a small-vehicular bridge was constructed. The construction of this bridge benefited 100% of the population of Palos Blancos and indirectly benefited approximately 5,628 inhabitants of the districts of San Miguel de Huachi, Popoy, Covendo and Tucupí.

PROJECT: RIO MATADERO - INICUA BRIDGE

Before the implementation of the project the community experienced significant transport problems, especially in the rainy season, because the small vehicles were unable to cross the river without becoming stuck in the mud. This made it difficult to get products to market, as well as for travel in general. The travelers had to place wooden boards and logs over the mud for the vehicles to pass. Trucks loaded with cargo often got stuck despite the boards.

The construction of the bridge facilitates the entrance and exit of vehicles carrying produce to various markets. Likewise, the community members are able to travel without difficulties. Time that was previously lost due to traffic problems or waiting for the river to fall can now be used in agricultural activities or other productive or social activities. The bridge directly benefits 147 families and indirectly the communities of Peñas, Charcas I, Charcas II, Charcas III, Cooperativa Union, Chayanta, and Osco.

PROJECT: CONSTRUCTION OF RECREATIONAL PLAZA “BENEMERITO RAMON MENDOZA”

Prior to the construction of the plaza the inhabitants of Palos Blancos did not have a central outdoor recreational area. The construction of the plaza provided the community a place for people of all ages to gather and experience a sense of community. Additionally, as part of a beautification strategy, the plaza also gives the town a better image. The circular plaza has an area of approximately 2,290 square meters and consists of a fountain with an electric circulating pump, various green spaces, interior ceramic-lined walkways, a recreational area for children, a perimeter sidewalk, and electric illumination.

PROJECT: CONSTRUCTION OF POTABLE WATER SYSTEM

Nariz de Canoa and Nuevo Mundo Communities

Before the implementation of the project the community members (primarily women and children) had to walk between 500 and 600 meters to get water from streams and natural springs, and then walk back carrying the heavy plastic drums filled with water. Due to the efforts involved in obtaining water, the community limited its consumption. This resulted in poor personal hygiene and cleanliness in general. With the installation of the potable water system, the aforementioned problems were essentially eliminated. Additionally, water tanks were installed in the lots of 25 families in the two communities, allowing ready access to an ample supply of water for drinking, bathing, and washing dishes and clothes. The availability of water improved personal hygiene and saves the community valuable person-hours that can now be used on other productive or social activities. It is anticipated that the availability of potable water will reduce water-borne illnesses.

PROJECT: BIOLOGICAL CONTROL OF “CHINCHE DEL CACAO” (Monalonion Spp)

A preliminary cacao pest-control study was undertaken in the area of Sapecho, community of Tupiza in the Alto Beni region of the Department of La Paz. In this zone of cacao production, phytosanitary control techniques are basically mechanical. Presently, the primary method for elimination of the cacao insect is manual, using family labor.

As part of the project the consulting institution, PROBIOMA, performed an insect control field test using a variety of pest-control alternatives. After completing the field test they reached the following conclusions:

- The population density of the pest was adequate to execute the test. The population of bugs was almost homogenous in all the evaluations performed before the application of

the different treatments. This was evident in the insignificant differences observed in the evaluations.

- In general, the technicians were able to observe a control effect on the bioregulators for both adults and nymphs, although only three days after the application in the case of medium-size and large nymphs.
- Among the bioregulators employed in this test, PROBIOBASS is the most promising for the control of the cacao insect. However, an adjustment needs to be made in regards to dose and concentration.

The cacao producers have experienced serious problems as a result of this pest. Though the results for possible treatments were promising, the study only conducted tests on the crops of 10 producers. As there are approximately 600 producers in the zone, additional testing is necessary.

PROJECTS IMPLEMENTED IN CARANAVI

PROJECT: CONCLUSION OF CARANAVI BUS TERMINAL

The Caranavi bus terminal is a major regional transportation center, serving as a hub for travelers going between the city of La Paz and the departments of Beni and Pando. The project scope included repairing and repainting the inner and outer walls of the terminal, installation of tile flooring, installation of cement sidewalks, procurement and installation of new metal doors and installation of lamp fixtures. The overall improvements resulted in a more attractive terminal and a cleaner environment for bus patrons.

Prior to improvements implemented under the project the sales offices for many of the transport companies were located on different streets of the city, which created an annoyance for passengers who had to spend time and money in taxis looking for the offices. Upon conclusion of the project all sales offices were relocated to the refurbished space in the bus terminal, vastly improving the efficiency of ticket purchase.

The improvements to the terminal have far-reaching impacts for both Caranavi and surrounding communities. The direct beneficiaries include the residents of Caranavi as well as seven transportation companies: Turbos, TransTotal, Veloz de la Norte, Yungueña, Turs Palmeras, Trans Bolivia and Trans 16 de Julio.

PROJECT: EXTENSION OF ENTRE RIOS SPORTS FIELD

The field is located in the community of Rosario Entre Rios. The previous dimensions of the field were 60 meters by 60 meters. The goal of the project was to extend the field to minimum dimensions of 80m by 80m using earth-moving equipment. To extend and widen the field, approximately 1,600 cubic meters of fill material were cut from a steep slope running along one side of the field. This cut effectively added 20 meters to the width of the field. The fill material generated from the cut was then transferred and placed in a depression along the front end of the field effectively adding 20 meters to the length. Fill material was compacted and the field was contoured to provide a slight slope from the center to the edges in order to facilitate proper drainage. Currently, this is the place where children, adolescents and adults from the area

practice sports. It is also used by the educational center to pass physical education classes. The project directly benefited approximately 900 inhabitants of Entre Rios and the surrounding area.

PROJECT: CONSTRUCTION OF A BRIDGE IN SANTA FE

This project consisted of the construction of a 76-meter vehicular suspension bridge. Before construction of the bridge the community members of General Perez and other surrounding communities had to travel nearly two hours over a mountain range to be able to connect with the main road (La Paz-Caranavi.) With the construction of the bridge the trip has been reduced to thirty minutes, significantly reducing travel time and avoiding the dangerous curving road.

Community members mentioned that they had previously used rafts or inner-tubes to cross the river, which was extremely dangerous after rains caused the river to rise. It was reported that previously several people died each year trying to cross the river. Additionally, many people attempting to transport products by raft lost their products in the river. The construction of the bridge has benefited approximately 1,000 families in the colonies of Santa Fé, Central Unión Perez, Colonia General Perez, Colonia San Juan, Colonia 6 de Mayo and Colonia San Jorge.

The bridge platform is constructed of quina quina wood that was provided by the communities as their counterpart contribution. The platform is hung from steel suspension cables supported by reinforced-concrete towers located on both sides of the river. In order to ensure that the community can afford to properly maintain the bridge, a toll has been implemented. The toll to cross the bridge is two Bolivianos for private vehicles and one Boliviano for community members. Pascual Condori is the community member currently in charge of ensuring that the tolls are collected.

PROJECT: BIOLOGICAL CONTROL OF *TUJO* or *CEPE* ANTS (*Atta* spp.)

The project consisted of controlled field applications of the bioregulators PROBIOBASS, TRICODAMP, and PROBIONE in order to assess their effectiveness in controlling the *tujo* (leaf-cutter) ant (*Atta* spp.), also commonly known in Spanish as *cepes*. This particular ant species damages various crops by eating their leaves; they affect 17% of the leaves in tropical forests. In order to control this pest, producers currently apply a variety of different, and sometimes dangerous, techniques. Among the most common are the following: chemical control, flooding of the nests, elimination of the queen and the fungus. Other more radical methods employed are the application of liquefied gas, gasoline and fire. The most common control method used is the application of a pesticide called Mirex.

Studies were performed by the organization PROBIOMA on eight parcels in the vicinity of Caranavi having *tujo* nests. In order to determine the safest and most effective pest control method, multiple tests were performed on 15 nests. The following conclusions were reached:

- Due to the internal characteristics of the nests of this type of insect, the use of solid bait is the most appropriate.
- To attract the insects, substances with higher sugar content or orange juice concentrate should be used.
- The insects' activity is constant all day, but it is greater and more regular after 6:00 p.m.

- The administration of the mixture PROBIOBASS + PROBIOVERT was effective at controlling this pest. The mixture has a good potential for the biological control of this type of insect in the zone of Sapecho.

The results obtained by the consulting institution are preliminary yet helpful to producers experiencing difficulties with these pests.

PROJECT: INCAHUARA ROAD MAINTENANCE

Prior to receiving maintenance, the road had been severely deteriorated by the effects of the heavy rains common to the region. The road is bordered along one side by steep, pronounced slopes that are subject to landslides. Community members reported that at times vehicles could not pass without becoming stuck in the middle of the road. They stated that taking products to market consumed a lot of time and was costly. Maintenance activities consisted of clearing of landslide debris, cleaning roadside ditches and filling potholes along a 50-kilometer stretch between the communities of Uyunense and Incahuara.

The maintenance work performed under the project allowed vehicles to enter and exit the community with relative ease and reduced the cost of transportation by 15% – 20%. Approximately 354 families from eight communities benefited from the project. Beneficiary communities were Exaltación, Manchego, Alto Broncini, Broncini Bajo, Chua Primera, Uyunense, General Perez, and Bolivar.

PROJECT: CHORONTA ROAD IMPROVEMENT

The roads were in very poor condition prior to receiving assistance from the project. Vehicles experienced great difficulties entering and exiting the community and producers reported that the rough roads added considerable time to the transport of agricultural products to the market. The road improvements realized under this project reduced these problems, directly benefiting 50 families. Improvement activities consisted of clearing of landslide debris, cleaning roadside ditches, and smoothing and leveling the road platform in the vicinity of the community of Villa Exaltación.

PROJECT: ALCOCHE-MONTEAGUDO ROAD IMPROVEMENT

The project consisted of road improvements in the Canton of Alcoche along an 18-km segment between the communities of Alcoche and Calacoto and a 25-km segment between Cruce Colonia Gualberto Villarroel y Monteagudo. Prior to the improvements made under this project these roads were often impassable during the rainy season and difficult to navigate during the dry season. Improvement activities consisted of clearing of landslide debris, cleaning roadside ditches, filling potholes, and smoothing and leveling the road platform. Improvements were facilitated using a front-end loader, road grader and two dump trucks that were rented from the Municipality of Caranavi.

The maintenance work provided by the project facilitated the entrance and exit of vehicles, reduced the price of transportation and allowed producers to deliver their products to market without delay. The project directly benefited 183 families in the communities of Calacoto, San José and Monteagudo.

PROJECT: CENTRAL NOR-ESTE ROAD IMPROVEMENT

Prior to improvements this 40-km stretch of road was filled with potholes. The community reported that most vehicles were unable to pass without becoming stuck in the middle of the road. Improvements consisted of filling potholes and stabilizing sections of the road bed with gravel.

The road improvement work conducted by the project facilitated the entrance and exit of vehicles, decreased the price of transportation for both cargo and passengers, reduced the time spent in transport and ensured the timely transportation of produce to market. The project benefited 252 families in the eight communities of Italaque, Ingavi, Quilla Quillani, Niño Jesús, Los Andes, Barrial, Juan del Valle A and Juan del Valle B.

PROJECT: PROGRESO AND SAN LORENZO ROAD IMPROVEMENT

The project consisted in maintenance of the access road to the communities of Progreso and San Lorenzo. The road was completely deteriorated prior to the project. Very few vehicles could reach the communities and a significant amount of time was spent transporting produce to market. The transportation prices, which depended on the road conditions, were high. Maintenance activities consisted of clearing of landslide debris, cleaning roadside ditches, placement of gravel to stabilize the road bed, and smoothing and leveling the road platform.

The road improvements done under this project facilitated the entrance and exit of vehicles, reduced transport time and reduced the cost of transportation by an estimated 20%. The project benefited 542 families from the 13 communities of San Lorenzo, Nueva Llusta, Río San Juanito, Villa Mercedes, Alto Sajama, Bajo Israel, Alto Israel, San Salvador, Alto San Lorenzo, Río Espíritu, Alto Luna and Villa el Carmen.

PROJECT: CENTRAL COLLASUYO ROAD IMPROVEMENT

Prior to the project the Central Collasuyo road was generally impassable and was worse during the rainy season. In many cases vehicles were unable to reach the communities and a significant amount of time was lost attempting to transport produce to the market. Improvement activities consisted of clearing of landslide debris, and smoothing and leveling of the road platform along a five-kilometer stretch. The road improvement work facilitated the entrance and exit of vehicles, decreased the cost of transportation and reduced the time involved in transporting produce to market. The project directly benefited 95 families.

PROJECT: 2 DE JULIO ROAD MAINTENANCE

The road was in poor condition and was nearly impassable during the rainy season. Vehicles were often unable to reach the communities and it was very difficult for producers to take their products to market. Improvement activities consisted of clearing of landslide debris, and

smoothing and leveling of the road bed along the access roads to 2 de Julio Primera, 2 de Julio Tercera and Alto Bolivar. The road maintenance performed facilitated the entrance and exit of vehicles, reduced the price of transportation and decreased the amount of time spent on transport. The project directly benefited 80 families from the communities of 2 de Julio Primera, 2 de Julio Tercera and Alto Bolivar.

PROJECT: WORKSHOP ON THE BOLIVIAN COFFEE COMMODITY CHAIN

The project provided funds to *La Cámara Agropecuaria de La Paz* to hold a workshop/seminar on the Bolivian coffee commodity chain. *La Cámara Agropecuaria de La Paz* is an umbrella organization representing the various agricultural and livestock organizations/federations within the Department of La Paz. The workshop was held July 18-19, 2002 and had 223 participants from multiple institutions. The primary objective of the seminar was to analyze the Bolivian coffee commodity chain through the participation of persons and organizations involved in various stages of coffee production, marketing, and sales. The aim was also to begin the process of organizing and developing the market for Bolivian coffee.

The results produced by the participants included the identification of the most important problems facing the coffee industry of Bolivia. These problems were organized into a tree diagram along with potential solutions. The set of potential solutions was then used to prepare project profiles with an estimate of the costs as a reference. A more precise estimate of the costs will be made in the project formulation stage. The following conclusions were reached at the workshop:

- The participants have decided to direct their activities to the production of specialty coffee. A diagnosis has been made in relation to the needs that the participants consider important for the production of specialty coffee.
- The needs established are directly related to the problems identified by the participants.
- It is essential to establish a foundation whose main objective is to promote the production of specialty coffee. This foundation should have the participation of all the actors in the chain, the municipalities of the region and the government of the Department of La Paz.
- It is important that Bolivian coffee promotion programs be established in international markets as an activity of the central government in coordination with all the participants in the Bolivian coffee commodity chain (producers, intermediaries, and exporters.)
- Producers are interested in improving the quality of their coffee. They would need technical assistance and training to effect such changes.
- The participation of *La Cámara Agropecuaria de La Paz* has been fundamental in the organization of the workshop and will continue being important for the improvement of the production of coffee and other products in the region.

PROJECT: AMBULANCE ACQUISITION, CARANAVI HOSPITAL

Prior to the approval of this small grant, the Caranavi hospital had only one ambulance, which was unable to sufficiently meet the needs of the community. As a result of the project a new ambulance (Toyota Landcruiser) was donated to the hospital. The hospital now has two ambulances that are primarily used to evacuate patients that need to be taken to La Paz or to the hospital in Coroico. The ambulance directly benefits the communities of Palos Blancos, Tipoani, Guanay and Caranavi.

PROJECT: BIOLOGICAL CONTROL OF THE INSECT “*HOPOTHENEMUS HAMPEI*” (BROCA DE CAFE)

The project consisted of controlled field applications of the bioregulator PROBIOBASS in order to determine its effectiveness in controlling the insect *Hopotheremus Hampei*, an exotic pest with African origins that was introduced to the coffee growing areas of the Yungas region from Peru in the 1980s. The damage caused to coffee crops by this pest is so widespread that it has become a significant inhibitor to the expansion of coffee production in the region. The insect is currently controlled primarily with chemical pesticides.

ACDI/VOCA contracted PROBIOMA to implement the project. PROBIOMA is an institution based in Santa Cruz dedicated to agricultural technical assistance and research. The main goal of this project was to implement field tests for biological control in the coffee (broca) and to test the efficiency of the bioregulator.

PROJECT: MAINTENANCE OF THE ROAD COLONIA SIETE MACHOS

The project consisted in maintenance of the four-kilometer access road to the community of Siete Machos, a tiny community approximately five minutes' drive from the locality of San Antonio in the district of Alto Beni in the Municipality of Caranavi. The existing road was built with local materials and lacked proper base material to stabilize the road platform. Maintenance activities consisted of cleaning and restoring roadside ditches using a motorized road grader, clearing landslide debris, placement of gravel to stabilize the road base, filling potholes, and smoothing and leveling the road platform. The motorized road grader, a front-end loader, and a dump truck were rented from the Municipality of Caranavi by the project in order to execute maintenance activities. The number of beneficiaries is estimated at 200 persons.

PROJECT: PURCHASE OF SOLAR PANELS (Co-implementation with SCB)

ACDI/VOCA's portion of the project consisted of purchasing the materials necessary to install photovoltaic (solar-powered) electrical systems in a number of different educational facilities and health care centers selected in coordination with Save the Children Bolivia. SCB oversaw the implementation of the installation.

PROJECT: STRATEGIC PLANNING WORKSHOP FOR ALTERNATIVE DEVELOPMENT IN THE YUNGAS

At the written request of the Vice Minister of Alternative Development, ACDI/VOCA facilitated a Strategic Planning Workshop for Alternative Development in the Yungas. The objectives of the workshop were to discuss methods for the establishment of a licit economy in the Yungas region to counter the excessive cultivation of illegal coca, and to initiate a participatory process among the various institutions involved in order to promote an integrated development in the region. The workshop was to be held on February 4-6, 2002 in La Paz for 73 participants. Unfortunately the workshop was cancelled after the first day due to lack of attendance. A majority of the potential participants were unable to attend due to roadblocks in the Yungas that were intentionally placed by citizens of the region as a form of social protest.

PROJECTS IMPLEMENTED IN LA ASUNTA

PROJECT: ACQUISITION OF MATERIAL FOR THE FLOR DE MAYO BRIDGE

This project consisted of the acquisition and delivery of a supply of reinforcing steel bars (rebar) to the community of Flor de Mayo for the construction of the Flor de Mayo Bridge. A total of 1,426 bars of varying diameters was delivered. Though the actual construction of this bridge is being completed through a contract with *Caminos Vecinales*, it was determined that ACDI/VOCA would deliver this material to the community as part of the North Yungas Integrated Development to demonstrate USAID/Bolivia's strong commitment to implementing alternative development activities in South Yungas.

III. PROJECT FINANCING

ACDI/VOCA was awarded US\$ 672,545 in operating and subgrant funds to implement the North Yungas Integrated Rural Development Project. In addition to USAID funding, **US\$ 128,147** in counterpart resources were generated. This amount is equivalent to approximately 19% of total project funding, including the pass-through funds and a 43% match of operational funds.

A budget pipeline report showing operating expenses and subgrant disbursements is provided in Appendix 1. Also included in Appendix 1 is a copy of Form 269-A, which includes all field and headquarters expenses for the life of project. As shown in the reports, a total of \$666,803, representing 99.14% of the total obligated funding, was expended. Of this, 99.18% of the funds budgeted for operating costs and 99.11% of the funds for subgrants were expended. The close-out period is over, and ACDI/VOCA does not expect any additional expenses to be incurred.

IV. CHALLENGES AND LESSONS LEARNED

Challenges

ACDI/VOCA encountered the following challenges throughout project implementation:

- 1) Internal political strife between various factions within the municipalities of Palos Blancos and Caranavi continued to create instability and to hamper in some cases efforts to go forward with project implementation. Additionally, instability in both these municipalities contributed to delays in completing the counterpart agreements.
- 2) Yungas residents' expectations of the North Yungas Integrated Rural Development Project far exceeded the capacity of the funding of this project.
- 3) As mentioned in previous project progress reports, the municipal governments in the Yungas lacked the institutional capacity and personnel to effectively design and implement projects and to reliably administer project resources. In order to overcome this weakness, ACDI/VOCA contracted technical consultants (two civil engineers, one accountant and one lawyer) to assist each of the three municipalities with project-related activities.

- 4) Pro-coca interests in the Yungas were engaged in a campaign to discredit alternative development efforts and to halt or delay implementation of alternative development projects.
- 5) The lucrative nature of coca production compared to other alternatives in the Yungas such as coffee and citrus make it difficult to convince producers of illegal and/or excess coca to reduce or eradicate coca production. Additionally, in some areas due primarily to soil and climate conditions and geographic isolation there appear to be few economically viable alternatives to coca production.

Lessons Learned

- 1) Given the fluid nature of the political situation in the Yungas, contingency planning must be a constant and integral part of project planning and implementation. The ability to effectively respond to the changing political environment is of paramount importance. Project efforts have yielded a substantial political benefit for alternative development efforts despite opposition from pro-coca elements. The project responded to local needs and priorities, providing temporary employment and achieving the intended objectives of high-visibility, high-impact, extensive outreach and positive political returns for the GOB alternative development program and participating municipalities.